

Appendix for Crawford, Goodman and Joyce (2010)

Table A1 Contributions of individual variables to the gap in children's cognitive test scores between top and bottom SEP quintiles

VARIABLES	Coefficient estimate	Mean in bottom quintile	Mean in top quintile	% contribution to SEP gap
SEP (gives the residual or unexplained SEP gap)				
Current SEP quintile = 2	0.2	0.0	0.0	0%
Current SEP quintile = 3	0.7	0.0	0.0	0%
Current SEP quintile = 4	2.1	0.0	0.0	0%
Current SEP quintile = 5 (richest)	1.5	0.0	1.0	7%
Parental cognitive ability				
CM's quintile in cognitive test scores, age 5 = 2	3.5	0.2	0.2	-1%
CM's quintile in cognitive test scores, age 5 = 3	6.1	0.2	0.2	0%
CM's quintile in cognitive test scores, age 5 = 4	1.7	0.2	0.3	1%
CM's quintile in cognitive test scores, age 5 = 5 (brightest)	4.8	0.1	0.3	3%
CMs quintile in cognitive test scores, age 10 = 2	3.3	0.3	0.1	-2%
CMs quintile in cognitive test scores, age 10 = 3	6.1	0.2	0.2	2%
CMs quintile in cognitive test scores, age 10 = 4	9.2	0.2	0.3	4%
CMs quintile in cognitive test scores, age 10 = 5 (brightest)	10.6	0.1	0.3	9%
Parental education				
Age dad left full-time education = 17 or 18	0.7	0.1	0.2	0%
Age dad left full-time education = 19-22	1.6	0.0	0.2	1%
Age dad left full-time education = 23-25	-2.5	0.0	0.1	-1%
Age dad left full-time education = Over 25	1.0	0.0	0.0	0%
Age mum left full-time education = 17 or 18	1.8	0.2	0.3	1%
Age mum left full-time education = 19-22	3.2	0.0	0.2	2%
Age mum left full-time education = 23-25	3.1	0.0	0.1	1%
Age mum left full-time education = Over 25	2.8	0.1	0.1	0%

Parent's social skills and educational attitudes and aspirations during childhood

Moderate behaviour problems at age 5 (Rutter scale)	1.8	0.2	0.1	0%
Severe behaviour problems at age 5 (Rutter scale)	-2.4	0.1	0.0	1%
Moderate behaviour problems at age 10 (Rutter scale)	-1.7	0.2	0.1	1%
Severe behaviour problems at age 10 (Rutter scale)	3.9	0.1	0.0	-1%
Overall score on Conners behaviour scale (std) (high is bad), age 10	0.4	0.1	-0.1	0%
Score on how seriously the child takes school (std), age 16	0.4	-0.2	0.2	1%
Thought they were good at maths, age 16	4.2	0.4	0.6	4%
Disliked school, age 16	0.9	0.7	0.5	-1%
Thought school was waste of time, age 16	-1.2	0.5	0.3	1%
Planned to stay in education/training post-18, age 16	1.1	0.5	0.8	1%
Child reads for leisure more than once a week, age 16	-0.2	0.3	0.4	0%
Locus of control score (std), average over ages 10 and 16	-0.4	-0.3	0.4	-1%
High earnings/wages mattered very much to CM, age 16	-0.1	0.4	0.4	0%
Self-esteem score (std), average over ages 10 and 16	0.7	-0.2	0.2	1%
Self-perceived ability score (std), age10	0.1	-0.2	0.3	0%
Self-concept score (std), age 16	1.1	-0.1	0.1	1%

Child's social skills

Strengths and Difficulties score (std) (high is good)	4.7	-0.3	0.3	11%
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Child's family background

Height (cm) of natural mother	0.1	163.3	164.7	0%
Weight (kg) of natural mother	-0.0	72.7	66.8	1%
Child is male	0.5	0.5	0.5	0%
Non-white ethnicity	2.4	0.1	0.0	0%
Lone parent family	-1.0	0.3	0.0	1%
CMs health status = Excellent (relative to 'very poor')	4.5	0.2	0.4	4%
CMs health status = Good (relative to 'very poor')	4.8	0.4	0.4	0%
CMs health status = Fair (relative to 'very poor')	2.3	0.2	0.1	-1%
CMs health status = Poor (relative to 'very poor')	2.9	0.1	0.0	-1%

CM has long-term limiting illness	-1.6	0.4	0.2	1%
Main activity of mother = Part-time employee (relative to full-time employee)	1.8	0.2	0.4	2%
Main activity of mother = Self-employed (relative to 'full-time employee)	-0.9	0.0	0.1	0%
Main activity of mother = Not employed (relative to 'full-time employee)	-0.1	0.7	0.2	0%
Main activity of dad = Part-time employee (relative to 'full-time employee)	-2.4	0.0	0.0	0%
Main activity of dad = Self-employed (relative to 'full-time employee)	-3.2	0.1	0.2	-1%
Main activity of dad = Not employed (relative to 'full-time employee)	2.6	0.3	0.0	-3%
Age of mother at birth of child = 20-24	4.6	0.3	0.1	-4%
Age of mother at birth of child = 25-29	5.0	0.5	0.4	0%
Age of mother at birth of child = 30-34	5.8	0.1	0.4	6%
Age of mother at birth of child = 35 or over	4.9	0.0	0.0	0%
Number of older siblings = 1	-3.2	0.3	0.3	1%
Number of older siblings = 2	-5.0	0.1	0.0	2%
Number of older siblings = 3 or more	-5.7	0.1	0.0	2%
Number of younger siblings = 1	-0.6	0.4	0.5	0%
Number of younger siblings = 2	-2.0	0.2	0.1	1%
Number of younger siblings = 3 or more	-2.9	0.1	0.0	1%
Child is a twin	-13.8	0.0	0.0	0%
Child has attended nursery	1.8	0.6	0.7	1%
Child has attended playgroup	2.4	0.4	0.5	1%

Child's home-learning environment

CM reads stories with or to the child every day	0.2	0.4	0.5	0%
Std Home-learning environment score (0-5s)	2.7	-0.1	0.1	2%
At least 1 parent helps with homework (6-16s)	-2.7	1.0	1.0	0%
Parents always make sure child completes homework (6-16s)	-3.2	0.8	0.8	-1%
Child can use a computer at home for homework (6-16s)	4.3	0.8	0.9	3%
Child talks with mother about school more than once a week (10-16s)	-0.7	0.6	0.7	0%
Child talks with father about school more than once a week (10-16s)	-1.0	0.3	0.4	0%
A parent attended parents' evening in last year	2.3	0.9	1.0	1%
CM received and read school reports in last year	-7.7	1.0	1.0	0%
CM is involved in school activities	-0.2	0.2	0.4	0%
CM speaks to teachers about child at least once a term	-3.6	0.6	0.6	0%

Educational attitudes and aspirations of the child and their parents

Child wants to carry on studying post-16 (10-16s)	8.3	0.6	0.8	6%
Child thinks they are fairly or very likely to go to uni/college (10-16s)	4.4	0.7	0.8	2%
Child thinks good marks in education are very important (10-16s)	-2.7	0.7	0.8	-1%
Child always or nearly always enjoys school (10-16s)	1.3	0.3	0.4	1%
CM thinks child fairly or very likely to go to uni/college	13.4	0.7	0.9	11%
CM wants child to continue in full-time education post-16	1.2	0.7	0.8	1%

Child behaviours

Child reads for enjoyment several times a week (6-16s)	10.0	0.6	0.8	8%
Child has been suspended/excluded for at least a day (6-16s)	2.3	0.1	0.0	0%
Police have contacted CM because child has broken the law (6-16s)	-5.2	0.0	0.0	1%
Child has bunked off school in last year (10-16s)	-0.7	0.2	0.2	0%
Child has stolen from a store (10-16s)	-5.1	0.1	0.1	1%
Child has smoked (10-16s)	-6.9	0.4	0.3	2%
Child sometimes or regularly drinks alcohol (10-16s)	5.6	0.3	0.3	1%
Child has used cannabis or glue/solvents (10-16s)	4.6	0.1	0.1	-1%
Child has bullied other children (10-16s)	1.3	0.2	0.1	-1%
Child goes to youth club at least once a week (10-16s)	-0.7	0.2	0.1	0%
Child goes to scouts/guides at least once a week (10-16s)	-0.3	0.1	0.2	0%
Child goes to sports club/lessons at least once a week (10-16s)	-0.4	0.5	0.6	0%

Other information

Child goes to independent or private school	8.3	0.0	0.0	1%
Child goes to single sex school	1.2	0.0	0.0	0%
Parent thinks teaching at child's school is very good	0.8	0.5	0.6	0%
Child has been bullied (10-16s)	-0.1	0.6	0.4	0%
Child likes all or nearly all of their teachers (10-16s)	0.1	0.3	0.3	0%
CM suffers from depression	1.4	0.3	0.1	-2%
Parental discipline (std)	2.6	0.0	-0.0	0%
Parent-child closeness (std)	-0.7	-0.1	0.1	0%

Parent-child conflict (std)	1.9	0.1	-0.1	-2%
CM feels they spend enough time with their children	0.4	0.7	0.5	0%
Family eats together every day	0.2	0.8	0.5	0%
Number of different activities done as family in last month (std)	-0.2	-0.3	0.3	-1%
Breastfed for < 1 month	0.7	0.1	0.2	0%
Breastfed for between 1 and 3 months	-0.2	0.1	0.2	0%
Breastfed for between 3 and 6 months	1.7	0.1	0.2	1%
Breastfed for > 6 months	3.1	0.1	0.2	1%
Was breastfed, but don't know how long for	7.3	0.0	0.0	0%
Self-concept score (Harter scale) (std) (10-16s)	-3.4	0.1	-0.3	6%

Source: Authors' calculations using the British Cohort Study (BCS).

Notes: Our sample includes all children of the cohort members of the BCS aged between 3 and 16 in 2004 for whom we observe a British Ability Scale (BAS) score. The outcome is children's age-normalised BAS (cognitive test) scores, expressed in percentile ranks. The contribution of each variable to the socio-economic position (SEP) gap is given by its coefficient estimate from the full regression specification multiplied by the extent to which it varies with SEP (the difference between the mean values of the variable in the top and bottom SEP quintiles). Statistical significance of the coefficient estimates is not taken into account in this decomposition analysis. 'Std' means 'standardised' and 'CM' means 'cohort member'.

Table A2 SEP gaps in the components of the SEP index

VARIABLES	% in bottom SEP quintile	% in top SEP quintile
Housing tenure		
Homeowners with mortgage	20	99
Homeowners outright	2	1
Other homeowners/private renters	13	0
Social renters	61	0
Other	3	0
Indicator of financial difficulty (self-assessed)		
In financial difficulty	21	0
Just getting by	54	0
Managing well	25	100
Occupational class		
Professional	0	13
Managerial-technical	1	83
Skilled non-manual	9	3
Skilled manual	7	0
Partly skilled	14	0
Unskilled	4	0
Not employed	65	0
Other	0	1
Equivalent family income (weekly)	£145	£379

Source: Authors' calculations using the British Cohort Study (BCS).

Notes: Our sample includes all children of the cohort members of the BCS aged between 3 and 16 in 2004 for whom we observe a British Ability Scale (BAS) score. Equivalent family income uses the modified-OECD equivalence scale, and the reference group for the equivalisation is childless couples.

Details of measures used

Here we elaborate on how we construct a handful of our covariates, for cases where it is not self-explanatory. Note that Section 2 of the paper gives details of how we construct our outcome of interest, and our measures of parental characteristics measured during the parent's childhood.

The home learning environment

The home-learning environment measure is for children aged under 6. Questions ask whether a parent has helped the child to learn numbers, the alphabet, colours, shapes and sizes, and whether the parent reads with the child daily. We count the number of positive answers to these questions, and standardise the resulting total.

Parental discipline, parent-child closeness and parent-child conflict

These measures are obtained from answers to questions from the Pianta index. The parent (cohort member) says how much they agree with a statement (e.g. 'You find it easy to be in tune with your child's feelings') on a scale of 1 to 5. Answers to each question are standardised, and the scores we use are averages across the relevant standardised variables.

Social skills

The construction of our measure of social skills is the same as above, except that the questions are from the Strengths and Difficulties Questionnaire and the parent (cohort member) indicates levels of agreement with a statement on a scale of 1 to 3.